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ABSTRACT

To do a comprehensive assessment of Oregon's professional technical education and work force programs, project evaluators identified, obtained, and extracted relevant data from documents and other related materials that pertained to key program concerns. Fieldwork consisted of four major activities: interviews with key players, written surveys with stakeholder groups, focus group discussions in each of Oregon's 18 professional technical education regions, and 4 indepth case studies of selected regions. It was discovered that Oregon had added new dimensions to its efforts to improve professional technical education and work force training activities and that negative attitudes toward professional technical education posed a serious barrier to implementation of the reform package. Specific conclusions were as follows: the involvement of business, industry, and labor was not extensive as it could be; there was a lack of outcome data based on uniform performance measures and standards; and a large number of high school students were not well prepared to take professional technical education courses at community colleges. The essential ingredients of exemplary practice were identified: a strong local leadership, extensive private sector involvement, emphasis on use of technology, incorporation of competency-based curriculum, effective program coordination, commitment to building staff capabilities, long-term strategic planning, and adequate resource support. (YLB)

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The Other Side of School Reform: Integrating Professional Technical Education

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U.S. DEPARTMENT OF EDUCATION
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BACKGROUND

Both national and local attention has focused in recent years on the challenges of bringing the U.S. workforce up to world class standards, training workers to meet the requirements of a high performance workplace, and improving the transition from education to work. In its report, *America's Choice: High Skills or Low Wages!*, the Commission on the Skills of the American Workforce concluded that the United States is headed toward an economic cliff unless fundamental changes are made in its approach to education and work. The Secretary's Commission on Achieving Necessary Skills (SCANS) was asked to determine whether our young people are capable of meeting the demands of the workplace. It concluded that most young people leave schools without adequate preparation to find and hold a good job. As part of its charge, SCANS has defined the skills needed for employment in the 21st century.

The Oregon Legislature enacted several groundbreaking pieces of legislation in response to these challenges. In 1989, Workforce 2000 I created 17 specific workforce programs. In 1991, Workforce 2000 II, with a budget of over $10 million continued this series of complex and interrelated partnerships for workforce training and education program development. Professional technical education in Oregon is offered in 18 occupational clusters in secondary schools and in some 460 certificate and degree programs in community colleges. Community colleges also offer a variety of targeted and tailored services to businesses and the community.

In addition to this legislation, a Workforce Quality Council, comprising 14 representatives from business, labor, education and human resource development agencies, was established to coordinate an integrated system of workforce education and training.

The Oregon Educational Act for the 21st Century, House Bill 3565, is in part modeled after the recommendations in the *America's Choice* report, including setting performance standards for all students called a Certificate of Initial Mastery and a Certificate of Advanced Mastery. This restructuring effort has placed Oregon in the national limelight as others look to us to see what will be the effect of such fundamental changes in the educational system. This major reform effort, however, must take place within a period of financial austerity as Measure 5 requires schools to slash operating budgets. Implementation of HB3565 faces both philosophic and economic challenges.

In this context of challenge and major educational and workforce reform, the legislature earmarked funds for a third party evaluation of professional technical

education and workforce programs. The evaluation was sponsored by several state agencies and carried out by staff of the Northwest Regional Educational Laboratory. These state agencies included: the Economic Development Department, the Department of Education, the Office of Community College Services, and the State Advisory Council on Career and Vocational Education.

METHODOLOGY

To do a comprehensive assessment of Oregon's professional technical education and workforce programs, project evaluators carried out a variety of data collection tasks. They identified, obtained and extracted relevant data from documents and other related materials that pertained to key program concerns. These documents included:

- Revised evaluation handbooks for professional technical education for high schools and community colleges
- Secondary Education Report of Vocational Enrollment (SERVE) reports
- Employment Division documents
- Workforce applications
- Biennial interim and final reports on professional technical education and Workforce 2000 I and II programs

The evaluators conducted fieldwork from October through December 1992 to collect both quantitative and qualitative data about professional technical education as a whole and about currently operating program components. Field work comprised four major activities:

- ***Interviews*** with key players to obtain perspectives on program processes and outcomes, including significant accomplishments, concerns, issues, and problems in program operation, coordination, and integration

- ***Written surveys*** with stakeholder groups to build a comprehensive database of stakeholders' perceptions of program processes and outcomes

- ***Focus groups discussions*** in each of the state's 18 professional technical education regions to obtain a more in-depth analysis of issues relating to program implementation and outcomes

- ***Four in-depth case studies*** of selected regions to identify exemplary practices and the essential elements common to them.

CONCLUSIONS AND RECOMMENDATIONS

Each of the study components has provided a wealth of information on the status of professional technical education in Oregon as reflected in existing data and as perceived by the various stakeholder groups. Based on the nature of the findings, it is appropriate to offer two sets of conclusions and recommendations: those pertaining to the overall professional technical education program and those specific to several critical program areas.

General Conclusions and Recommendations

Commitment and Priorities

With the passage of HB3565 and the implementation of Workforce 2000 I and II programs, the state has added new dimensions to its efforts to improve professional technical education and workforce training activities. Most educators and other stakeholder groups welcome these initiatives as a catalyst for a new wave of school reform activities that must be implemented if Oregon is to adequately prepare its students and workers for the 21st century. While these efforts have enhanced both the nature and scope of professional technical education, the bulk of the work in terms of implementation remains to be accomplished. In view of the current budget shortfalls and in the climate of Measure 5, an uneasy feeling exists among many school staff and program administrators that the commitment and priorities set in motion by the state may lose their momentum. Moreover, many policymakers and administrators believe that to continue to implement elements in the reform package, an increasingly greater amount of resources will be needed.

We recommend that the state reaffirm its commitment and priorities by providing sufficient resources to maintain and build on the momentum it has achieved in improving professional technical education and workforce training in the state.

Attitudinal Barriers

Strong evidence suggests that negative attitudes toward professional technical education pose a serious barrier to the implementation of the reform package. Many parents, students and school staff define success as a four-year college degree. They perceive professional technical education as less than desirable, a dumping ground for less able students. Indeed, many school staff see their job as preparing students for four-year colleges. The pervasiveness of these attitudes among parents, students and school staff themselves calls for an extensive and

sustained educational campaign to increase awareness of the importance and value of professional technical education in creating a world class workforce for the 21st century.

We recommend that the state in collaboration with business, industry and labor make a concerted effort to carry out such a campaign as an integral part of its strategy for improving professional technical education. To help change the negative image of professional technical education, the state should develop a marketing strategy, perhaps through the mass media, to give the general public a more accurate depiction of the critical role of professional technical education in building a secure future for the state and its people.

Accomplishments

During the past several years, significant and far-reaching improvements have been made in professional technical education and workforce training programs in the state:

- Professional technical education has gained increased visibility
- Additional resources (e.g., Workforce 2000 I and II funding) have been provided
- Program coordination has improved through such innovations as 2+2/TPAD programs
- Involvement of business, industry and other stakeholder groups has become more intense and meaningful
- Special populations are now better served
- Applied academics have been more extensively incorporated
- Signs indicate that attitudes toward professional technical education are slowly changing for the better
- The quality of JTPA programs has continued to improve

While formidable challenges and obstacles remain, professional technical education practitioners and policymakers have reasons to be encouraged by these recent developments.

We commend the local, regional, and state level leaders for their outstanding contributions to professional technical education and recommend that they continue their collaborative efforts in building a world class workforce for the 21st century

Specific Conclusions and Recommendations

Involvement of Stakeholder Groups

The involvement of business, industry and labor in professional technical education is highly beneficial. However, their involvement has not been as extensive as it could be. In some cases, such involvement has been limited and short-term, lessening its value in improving program practices. The involvement of labor, in particular, has been much less than it could be. In many cases, the involvement does not include areas in which the maximum benefits can be achieved (e.g., internships for teachers and apprenticeships for students). In addition, the bulk of the involvement has come from larger businesses. Small businesses are seldom involved. Parental involvement is essentially non-existent.

We recommend that concerted efforts be made to increase the involvement of all stakeholder groups in general and the involvement of business, industry and labor in particular. Such efforts should ensure that (a) the stakeholder groups are well prepared (e.g., through orientation and debriefing meetings) to engage in meaningful involvement, (b) their involvement is consistent and long term, and (c) turf issues, a major barrier to effective involvement, are addressed. Also, parents should be given an active role in the development and implementation of professional technical education.

We further recommend that such involvement occur in areas where it counts the most. This includes: (a) providing internships for teachers and structured work experiences, including apprenticeships, for students; (b) infusing industry standards in curriculum development; (c) assessing the needs of business, industry, and labor; and (d) obtaining and using labor market information. In addition, special efforts should be made to encourage and facilitate the involvement of small businesses and labor. Such involvement should be facilitated through the use of waivers from restrictive rules and regulations whenever possible.

Program Coordination

Great variation exists in the extent of program coordination among different levels of the professional technical education system. The strongest linkage exists between high schools and community colleges, mainly through 2+2/TPAD articulation agreements. Coordination with four-year colleges is very limited, if it exists at all. Coordination with middle schools and private vocational schools is virtually non-existent. Programs funded through Workforce 2000 I and II appear well coordinated with Carl Perkins programs, but much less so with JTPA and

JOBS programs. In many cases, coordination is hampered by (a) a lack of time or the absence of a designated staff to carry out the coordination function, (b) a lack of understanding of the other agencies, (c) divergent goals of different programs, and (d) turf issues needing to be addressed.

We recommend that, in order to establish a coherent system of professional technical education, greater attention and increased resources (in the form of release time or staff positions) be dedicated to program coordination. Such efforts should be designed to (a) eliminate duplicated services within and across programs, (b) strengthen 2+2/TPAD programs as a vital means of coordination between high schools and community colleges, and (c) create a consistent and common vehicle for recordkeeping and information dissemination. In addition, the recently created Workforce Quality Council should assume an increasingly proactive role in bringing together business, industry, labor, and government to develop a more focused and coherent workforce training system. The state should study the feasibility of creating a single agency to administer most, if not all, of the workforce programs, as suggested by the Workforce Quality Council.

Information System

There is a general dearth of outcome data based on uniform performance measures and standards across the existing professional technical education programs. This makes the sharing of meaningful information among different state agencies and the evaluation of individual programs difficult, if not impossible.

We recommend that the state continue to expedite its current effort to establish a shared information system to maintain outcome data as well as to disseminate program information among different state agencies. Such a system should be decision-focused and should incorporate a set of uniform measures and standards consistent with those specified in the Oregon Benchmarks. It should also have the capability of tracking professional technical students over time to provide longitudinal data for planning and evaluation purposes.

Curriculum and Instruction

Most high school and community college students in professional technical education are taking applied academics courses—the most popular are applied mathematics and applied communication. Applied academics are generally well received by students, who rate very favorably both the course contents and instructional methods. However, because of the fullness of the mandated curriculum, applied academics classes are usually offered as electives. When budget cuts occur, applied academics are among the first to be eliminated from the

curriculum. Only a small percentage of the students have participated in structured work experience programs. At the high school level, little structured work experience is provided. When available, work experience tends to be loosely organized, mostly unsupervised, and generally contingent upon the student being able to find a job which may or may not be related to the student's occupational goals. Apprenticeship programs are rare at both the high school and community college levels. The provision of structured work experience is especially problematic in remote rural areas where resources are limited and businesses are small and few. In addition, the use of industry standards in curriculum development and the use of competency-based approaches in instruction are not widespread in professional technical education.

We recommend that greater attention be paid to curriculum and instruction issues with a view to increasing (a) the provision of structured work experiences, (b) the use of available industry standards in curriculum development, and (c) the use of competency- or outcome-based approaches in delivering instruction. We further recommend that where they do not exist industry standards be developed for use in curriculum development and instruction.

Student Preparation

A large number (up to one half or more) of high school students are not well prepared to take professional technical education courses at community colleges. Lacking basic skills in mathematics, science, writing, and computer skills, these students often require more instructional time to benefit from community college programs.

We recommend that high school programs be strengthened to better prepare students for further education in professional technical areas. To this end, the high school programs should (a) consider the increased use of competency-based instruction, (b) provide more hands-on experience, (c) upgrade equipment and facilities, and (d) place increased emphasis on proficiency and application of skills in mathematics, English, reading, and writing.

Special Populations

The enrollment of special populations (e.g., female, disadvantaged, limited English proficient, and disabled students) and their use of support services have increased during the past two years. The increase is mainly due to (a) better support services, (b) better coordination with other agencies, and (c) better staff development in this area.

We recommend that efforts to increase the enrollment of special populations be continued and intensified where appropriate by (a) encouraging special students to enroll in professional technical education, (b) better marketing of available services, and (c) changing negative attitudes toward nontraditional occupational options (e.g., women in manufacturing industries).

Professional Development

Most professional technical educators participate in professional development activities during the school year and provide highly favorable ratings on the effectiveness of these activities. The most prevalent activities are professional association meetings and seminars or workshops. Much less common are peer coaching/guided practice, and internships.

We recommend that this trend be continued with increased emphasis on internships with business and industry. We further recommend that professional development activities be extended to academic teachers to raise their awareness of the world of work and to improve their attitudes toward professional technical education in general.

Economic Development Priorities

A significant number of educators, including some professional technical program administrators, are not familiar with the economic development priorities in their respective regions. Many are not familiar with the priorities for the state as a whole. A quarter or less of the administrators indicate that they are aware of plans to continue programs started under Workforce I and II in their respective regions. If professional technical education and workforce development efforts are to be highly congruent with and supportive of specific economic development objectives, much more needs to be done to publicize such objectives.

We recommend that greater efforts be made to raise public awareness of the economic development plans of the respective regions as well as the overall priorities which the state as a whole is pursuing. We further recommend that steps be taken to increase the use of labor market information in designing professional technical education programs.

Development of Effective Practices

The case studies reveal that the essential ingredients of exemplary practices are (a) strong local leadership, (b) extensive private sector involvement, (c) emphasis on the use of technology, (d) incorporation of competency-based curriculum and

instruction, (e) effective program coordination, (f) commitment to building staff capabilities, (g) long-term strategic planning, and (h) adequate resource support.

We recommend that local, regional and state level policymakers promote and nurture these ingredients in future program development and implementation so that effective practices are developed and replicated on an ongoing basis.

Dissemination of Effective Practices

In most instances, professional technical educators find out about effective practices through discussions with colleagues, at professional conferences, in reading, or by site visits. They share information on such practices in much the same ways.

Inasmuch as sharing effective practices is vital to the overall effort to improve professional technical education, we recommend that more extensive and systematic approaches be developed to disseminate such information. Examples include developing a dedicated newsletter and/or an electronic bulletin board on effective programs and using video technology (e.g., short videotapes on effective practices) to disseminate relevant information to a wider audience in a timely manner.